

INTERNATIONAL SEARCH REPORT

International Classification No
PCT/EP 08082

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K47/48 C07H15/252

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K C07H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, MEDLINE, EMBASE, BIOSIS, BEILSTEIN Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	ZUNINO F ET AL: "BIOLOGIC ACTIVITY OF DAUNORUBICIN LINKED TO PROTEINS VIA THE METHYLKETONE SIDE CHAIN" TUMORI, XX, XX, vol. 67, no. 6, 31 December 1981 (1981-12-31), pages 521-524, XP008016382 the whole document --- -/--	1-10

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

25 November 2003

Date of mailing of the international search report

03/12/2003

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INTERNATIONAL SEARCH REPORT

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PCT/EP 08082

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WILLNER D ET AL: "(6-MALEIMIDOCAPROYL)HYDRAZONE OF DOXORUBICIN - A NEW DERIVATIVE FOR THE PREPARATION OF IMMUNOCONJUGATES OF DOXORUBICIN" BIOCONJUGATE CHEMISTRY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, US, vol. 4, 1993, pages 521-527, XP000783675 ISSN: 1043-1802 the whole document ---	1-10
Y	RHO ET AL.: "Synthesis of new anthracycline derivatives containing acetylsilylic or palmitic acid moiety" BULL. KOREAN CHEM. SOC., vol. 22, no. 6, 2001, pages 587-592, XP002240301 Seoul the whole document ---	1-10
A	RHO ET AL.: "Synthesis of new anthracycline derivatives containing pyruvic, aspartic, or N-acetylaspartic acid molecule" SYNTHETIC COMMUNICATIONS, vol. 32, no. 13, 2002, pages 1961-1975, XP001148932 USA ---	
A	EP 0 295 119 A (MICROBIAL CHEM RES FOUND) 14 December 1988 (1988-12-14) cited in the application ---	
A	US 4 360 664 A (UMEZAWA HAMA ET AL) 23 November 1982 (1982-11-23) ---	
A	EP 0 039 060 A (MICROBIAL CHEM RES FOUND) 4 November 1981 (1981-11-04) ---	
A	KRUEGER M ET AL: "Synthesis and stability of four maleimide derivatives of the anticancer drug doxorubicin for the preparation of chemoimmunoconjugates" CHEMICAL AND PHARMACEUTICAL BULLETIN, PHARMACEUTICAL SOCIETY OF JAPAN. TOKYO, JP, vol. 45, no. 2, 1997, pages 399-401, XP002162561 ISSN: 0009-2363 ---	
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INTERNATIONAL SEARCH REPORT

International Application No.
PCT/EP 08082

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>NAGY A ET AL: "Synthesis and biological evaluation of cytotoxic analogs of somatostatin containing doxorubicin or its intensely potent derivative, 2-pyrrolinodoxorubicin"</p> <p>PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 95, no. 4, 17 February 1998 (1998-02-17), pages 1794-1799, XP002220092 ISSN: 0027-8424</p>	
A	<p>HOES C J T ET AL: "Synthesis and biological evaluation of immunoconjugates of adriamycin and a human IgM linked by poly(N-(2-hydroxyethyl)-L-glutamine!"</p> <p>JOURNAL OF CONTROLLED RELEASE, ELSEVIER SCIENCE PUBLISHERS B.V. AMSTERDAM, NL, vol. 38, no. 2, 1 February 1996 (1996-02-01), pages 245-266, XP004037410 ISSN: 0168-3659</p>	
A	<p>PRIEBE W ET AL: "Doxorubicin- and daunorubicin-glutathione conjugates, but not unconjugated drugs, competitively inhibit leukotriene C4 transport mediated by MRP/GS-X pump"</p> <p>BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, ACADEMIC PRESS INC. ORLANDO, FL, US, vol. 247, no. 3, 29 June 1998 (1998-06-29), pages 859-863, XP002217454 ISSN: 0006-291X</p>	
A	<p>WO 99 57126 A (KANG HEUN SOO ; RHO YOUNG S (KR); PARK SANG CHUL (KR)) 11 November 1999 (1999-11-11)</p>	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/08082

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claims 5-8,12,13,16-20,22,23 relate to a method for preparing an extremely large number of possible compounds/methods. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds/methods claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely the examples.

Present claim 2 relate to a method for preparing compound defined by reference to a desirable characteristic or property, namely "a functional group able to react with a thiol". The claims cover all compounds having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the product/compound/method/apparatus by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely the examples.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

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 PCT/EP
 08082

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			JP 2065169 C	24-06-1996
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			JP 7103146 B	08-11-1995
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